



## DECLARATION, POWER OF ATTORNEY AND PETITION

I, Barton L. SMITH, Ph.D., declare: that I am a citizen of the United States of America; that my residence is Logan, Utah and my post office address is 1252 Cedar Heights, Logan, Utah 84341; that I verily believe I am the original, first, and sole inventor of the subject matter of the invention or discovery entitled THERMOACOUSTIC COOLING DEVICE, for which a patent is sought and which is described and claimed in the specification filed on March 25, 2004; and granted Serial No. 10/811,479 (I hereby authorize the attorneys of Clayton, Howarth & Cannon, P.C., to insert said serial number when known); that I have reviewed and understand the contents of the above-identified specification, including the claims; and that I acknowledge the duty to disclose information which is material to the examination of this application in accordance with Section 1.56(a) of Title 37 of the Code of Federal Regulations.

I hereby claim the benefit under Section 119(e) of Title 35 of the United States code of the earlier filed application Serial No. 60/457,619, filed March 25, 2003; and, insofar as the subject matter of each of the claims of this application is not disclosed in the earlier filed pending application in the manner provided by the first paragraph of Section 112 of Title 35 of the United States Code, I acknowledge the duty to disclose material information, as defined in Section 1.56 of Title 37 of the Code of Federal

Regulations, which occurred between the filing dates of the earlier filed applications and the filing date of this application.

I declare further that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful, false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful, false statements may jeopardize the validity of the application or any patent issuing thereon.

I hereby appoint as my attorneys and/or patent agents, Grant R. Clayton, Registration No. 32,462; Alan J. Howarth, Registration No. 36,553; Karl R. Cannon, Registration No. 36,468; Clifford B. Vaterlaus, Registration No. 47,261; Terrence J. Edwards, Registration No. 50,254; and Brett J. Davis, Registration No. 46,655, all with full power of substitution and revocation, to prosecute this application and to transact all business in the Patent and Trademark Office connected therewith.

Please direct all future correspondence in connection with this application to:

Customer No. 20449

Please direct all telephonic and facsimile communications to:

Karl R. Cannon  
Telephone: (801)255-5335  
Facsimile: (801)255-5338

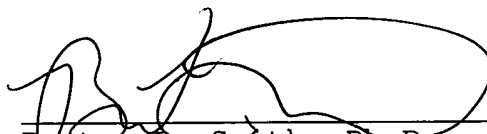
Please reference the below provided attorney docket number in all communications:

T10050

Wherefore, I pray that Letters Patent be granted to me for the invention or discovery described and claimed in the foregoing specification and claims, declaration, power of attorney, and this petition.

Signed at Logan, UT, this  
(City) (State)  
1 day of April, 2004.

INVENTOR:

  
Barton L. Smith, Ph.D.

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Attorney Docket No. T10050

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICANT: BARTON L. SMITH )  
TITLE: THERMOACOUSTIC COOLING )  
DEVICE )  
SERIAL NO.: 10/811,479 ) CERTIFICATE UNDER 37  
FILED: March 25, 2004 ) C.F.R. § 3.73(b) TO  
EXAMINER \_\_\_\_\_ ) ESTABLISH RIGHT OF  
ART UNIT: \_\_\_\_\_ ) ASSIGNEE TO TAKE ACTION  
)  
)  
)  
)  
)  
)

Commissioner for Patents  
P.O. Box 1450  
Alexandria, Virginia 22313-1450

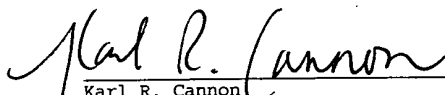
Sir:

To establish its right to take action before the Office in the above-captioned matter, UTAH STATE UNIVERSITY certifies that it is the assignee of the entire right, title and interest in the patent application identified above by virtue of either:

A. [X] An assignment from the inventor of the patent application identified above. The assignment was

Certificate of Deposit Under 37 C.F.R. § 1.8

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail, postage prepaid, in an envelope addressed to Mail Stop Missing Parts, Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450, on the 12 day of July, 2004.

  
Karl R. Cannon  
Attorney Registration No. 36,468  
Attorney for Applicant

recorded in the Patent and Trademark Office at Reel \_\_\_\_\_, Frame \_\_\_\_\_, or for which a copy thereof is attached.

B. [ ] A chain of title from the  
\*\*\*[inventor(s)/applicant(s)]\*\*\* of the  
\*\*\*[patent/trademark application]\*\*\* identified  
above, to the current assignee as shown below:

1. From: \_\_\_\_\_ To: \_\_\_\_\_

The document was recorded in the Patent and Trademark Office at Reel \_\_\_\_\_, Frame \_\_\_\_\_, or for which a copy thereof is attached.

2. From: \_\_\_\_\_ To: \_\_\_\_\_

The document was recorded in the Patent and Trademark Office at Reel \_\_\_\_\_, Frame \_\_\_\_\_, or for which a copy thereof is attached.

3. From: \_\_\_\_\_ To: \_\_\_\_\_

The document was recorded in the Patent and Trademark Office at Reel \_\_\_\_\_, Frame \_\_\_\_\_, or for which a copy thereof is attached.

C. [X] Copies of assignments or other documents in the chain of title are attached.

The undersigned (whose title is supplied below) is empowered to sign this certificate on behalf of the assignee.

I hereby authorize the attorneys of Clayton, Howarth & Cannon, P.C., to insert said serial number when known.

I hereby declare that all statements made herein of my own knowledge are true, and that all statements made on information and belief are believed to be true; and further, that these statements are made with the knowledge that willful false statements, and the like so made, are punishable by fine or imprisonment, or both, under Section 1001, Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

Dated this 2<sup>ND</sup> day of APRIL, 2004.

UTAH STATE UNIVERSITY

By J. J. Kubien  
Name: J. J. KUBIEN  
Title: VP - TECH.

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A S S I G N M E N T

WHEREAS, Barton L. SMITH, Ph.D., a citizen of the United States of America having a post office address of 1252 Cedar Heights, Logan, Utah 84341, has invented a method and apparatus entitled THERMOACOUSTIC COOLING DEVICE, hereinafter called the "invention,"

preferred embodiments of which are disclosed in a United States patent application executed on April 1, 2004 and being assigned application serial no. 10/811,479 and filed on March 25, 2004, and identified as File No. T10050 of the law firm, Clayton, Howarth & Cannon, P.C., P.O. Box 1909, Sandy, Utah 84091 (I hereby authorize the attorneys of Clayton, Howarth & Cannon, P.C. to insert said serial number, filing date and execution date when known).

WHEREAS, Assignee, UTAH STATE UNIVERSITY, a university of higher education and a nonprofit corporation, organized and existing under the laws of the State of Utah, located at 570 East Research Park Way, Suite 101, North Logan, Utah 84341, is desirous of acquiring the entire right, title and interest in the invention;

NOW THEREFORE, in consideration of one dollar (\$1.00) and other good and valuable consideration paid to me by the Assignee,

WHEN RECORDED RETURN TO:

Karl R. Cannon [T10050]  
Clayton, Howarth & Cannon, P.C.  
P.O. Box 1909  
Sandy, Utah 84091

the receipt and sufficiency of which is hereby acknowledged, I  
HEREBY ASSIGN TO THE ASSIGNEE:

The entire right, title and interest in said invention and in the above-identified United States patent application and in all divisions, continuations and continuations-in-part of said application, or reissues or extensions of Letters Patent or Patents granted hereon, and in all corresponding applications filed in countries foreign to the United States, and in all patents issuing thereon in the United States and Foreign countries.

The right to file foreign patent applications on said invention in its own name, wherever such right may be legally exercised, including the right to claim the benefits of the International Convention for such applications.

I hereby authorize and request the United States Commissioner for Patents, and such Patent Office officials in foreign countries as are duly authorized by their patent laws to issue patents, to issue any and all patents on said invention to the Assignee as the owner of the entire interest, for the sole use and behoof of the said Assignee, its successors, assigns and legal representatives.

I hereby agree, without further consideration and without expense to me, to sign all lawful papers and to perform all other lawful acts which the Assignee, or the Assignee's successors, assigns and legal representatives, may request of me to make this Assignment fully effective, including, by way of example but not of limitation, the following:

WHEN RECORDED RETURN TO:

Karl R. Cannon [T10050]  
Clayton, Howarth & Cannon, P.C.  
P.O. Box 1909  
Sandy, Utah 84091

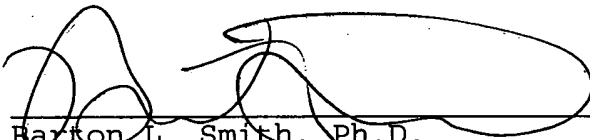


Prompt execution of all original, divisional, substitute, reissue, and other United States and foreign patent applications on said invention, and all lawful documents requested by the Assignee, or the Assignee's successors, assigns and legal representatives, to further the prosecution of any of such patent applications.

Cooperation to the best of my ability in the execution of all lawful documents, the production of evidence, nullification, reissue, extension, or infringement proceedings involving said invention.

This assignment and agreement shall be binding upon my heirs and legal representatives.

Executed this 1 day of April, 2004, at  
Logan UT  
(City, State)

  
Barton L. Smith, Ph.D.

STATE OF UTAH )  
COUNTY OF Cache ) : ss.

On April 1, 2004, before me personally appeared Barton L. SMITH, Ph.D., known to me to be the person described and who signed the foregoing Assignment in my presence and acknowledged under oath before me that he has read the same and knows the contents thereof and that he executed the same as his free act and deed and for the purposes set forth therein.

  
NOTARY PUBLIC

My Commission Expires:

Residing at

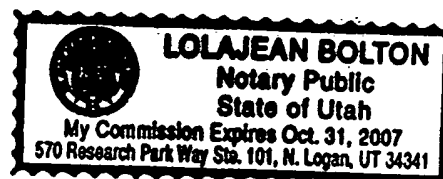
Oct. 31, 2007

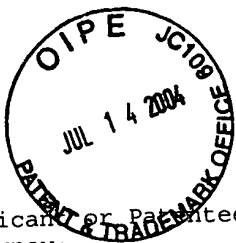
Logan, Utah

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WHEN RECORDED RETURN TO:

Karl R. Cannon [T10050]  
Clayton, Howarth & Cannon, P.C.  
P.O. Box 1909  
Sandy, Utah 84091





Attorney Docket No. T10050

Applicant or Patentee: Barton L. SMITH  
Attorney: Karl R. Cannon

Filed: March 25, 2004

For: THERMOACOUSTIC COOLING DEVICE

VERIFIED STATEMENT (DECLARATION) CLAIMING SMALL ENTITY  
STATUS (37 CFR 1.9 (f) and 1.27 (d))  
NONPROFIT ORGANIZATION

I hereby declare that I am an official empowered to act on behalf of the nonprofit organization identified below:

NAME OF ORGANIZATION: Utah State University

ADDRESS OF ORGANIZATION: 570 East Research Park Way, Suite 101  
North Logan, Utah 84341

TYPE OF ORGANIZATION:

- ( x ) University or other institution of higher education  
( ) Tax exempt under Internal Revenue Service Code (26 USC 501(a) and 501(c) (3))  
( ) Nonprofit scientific or educational under statute of state of The United States of America  
(Name of state \_\_\_\_\_)  
(Citation of statute \_\_\_\_\_)

I hereby declare that the nonprofit organization identified above qualifies as a nonprofit organization as defined in 37 CFR 1.9(e) for purposes of paying reduced fees under section 41(a) and (b) of Title 35, United States Code with regard to the invention entitled THERMOACOUSTIC COOLING DEVICE by inventor Barton L. SMITH, described in

- ( ) the specification filed herewith.  
( x ) application serial no. 10/811,479, filed March 25, 2004  
( ) patent no. \_\_\_\_\_, issued \_\_\_\_\_.

I hereby declare that rights under contract or law have been conveyed to and remain with the nonprofit organization with regard to the above identified invention.

If the rights held by the nonprofit organization are not exclusive, each individual, concern or organization having rights to the invention is listed below\* and no rights to the invention are held by any person, other than the inventor, who could not qualify as a small business concern under 37 CFR 1.9(d) or by any concern which would not qualify as a small business concern under 37 CFR 1.9(d) or a nonprofit organization under 37 CFR 1.9(e).

\*NOTE: Separate verified statements are required from each named person, concern or organization having rights to the invention averring to their status as small entities. (37 CFR 1.27)

FULL NAME N/A

ADDRESS N/A

( ) Individual ( ) Small Business Concern ( ) Nonprofit Organization

I acknowledge the duty to file, in this application or patent, notification of any change in status resulting in loss of entitlement to small entity status prior to paying, or at the time of paying, the earliest of the issue fee or any maintenance fee due after the date on which status as a small entity is no longer appropriate. (37 CFR 1.28(b))

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under section 1001 of title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application, any patent issuing thereon, or any patent to which this verified statement is directed.

NAME OF PERSON SIGNING:

TITLE IN ORGANIZATION:

ADDRESS OF PERSON SIGNING:

Steven J. Rubisen  
Vice President Tech. Comm  
570 East Reserarch Park Way, Suite 101  
North Logan, Utah 84341

Steven J. Rubisen  
Signature

4/2/04  
Date

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